# AMERICAN VETERINARY REVIEW,

OCTOBER. 1887.

## EDITORIAL.

UNITED STATES VETERINARY MEDICAL ASSOCIATION.—The twenty-fourth annual meeting—quite a large attendance from various parts of the country—the failure of good useful work—"Nothing, absolutely nothing was done"—failure of the committee to report—that of the Committee on Prizes, declining to grant the prize, accepted—vote reconsidered and the prize given to the paper bearing the signature of "Trianon"—vote irregular and unconstitutional—The REVIEW cannot coincide in the decision, and withholds its addition to the prize of the Association—papers prepared for the meeting not brought to light—election of new officers good—their responsibility great—danger to the life of the Association. INTERNATIONAL MEDICAL CONGRESS.—Could an International Veterinary Congress be held in the United States?—Necessity for American graduates to be appointed and to attend the next Congress in Paris in 1887—Recognition of the veterinary profession in the Washington Assembly—Dr. Trumbower's letter—A good example to be followed by other medical bodies. PROF. PAQUIN'S LETTER —Our correction as to the assistance given by Missouri to advance the veterinary profession. DIRECTOR NOCARD OF THE ALFORT SCHOOL—It means progress and a new impulse to the cause of veterinary science in France. GOOD EXAMPLE FROM AMERICA FOLLOWED IN EUROPE.—The Berlin Veterinary School elevated to the rank of University—This already done in the United States. AGE TELLING IN OLD ANIMALS.—Dr. Miller's letter—Apparent disagreement amongst veterinarians. VETERINARY HONORS.—Prof. R. S. Huidekoper receives the title of Honorary Associate of the Royal College of Veterinary Surgeons.

UNITED STATES VETERINARY MEDICAL ASSOCIATION.—Pursuant to notice, the twenty-fourth annual meeting of the United States Veterinary Medical Association was held on the 20th of September. A total of nearly fifty members responded to their names, including veterinarians from New York, New Jersey, Con-

necticut, Maryland, Massachusetts, Pennsylvania, Ohio and other states. Numerically it was a very respectable gathering, yet, when we examine the record of proceedings, as prepared by the Secretary, and which we print in this number of the REVIEW, we regret that it is our duty to say that, although it makes very good reading, it contains no reference to any good work or important discussion to distinguish honorably the results accomplished by the meeting. In fact, to repeat the words which convey the impressions of many of the members present, "nothing, absolutely nothing, was done."

The committees, one and all, with perhaps a single exception, failed to report anything of value, while others were content obligingly to "report progress," which being rightly defined means the negation of action, or "stationary motion." There was, however, one thing curiously and peculiarly notable accomplished by this meeting. We refer to the action deliberately ignoring, or rather studiously overruling the report of the Committee on Prizes, by the passage of the unconstitutional vote by which the Association accorded a prize to the author of a paper which had been returned with an adverse report by the Committee of Adjudication, which had been authorized and empowered to determine the merit of the treatise.

Two papers had been presented—one was considered an excellent compilation and nothing more—the other, though possessing some claims to originality, not being deemed of sufficient value or literary quality to justify such a sanction and endorsement of the Association as would be expressed by the bestowal of the prize.

The Committee reported to this effect, and the report was accepted by a vote of the Association, but only to be followed by a second resolution, reversing the first and putting a negative upon the entire former proceedings. All this occurred during the absence of the committee from the room, and consequently, their inability to defend their decision. The result is that by an unconstitutional vote, the Association prize has been awarded to a paper bearing the signature of Trianon.

We say the vote in question is in violation of the Constitution

of the Association. The words of Article 10, Chapter VII., of that instrument are:

ART. 10. It shall be the duty of the Prize Committee to examine all essays presented to them and to award the prizes, if the papers are, in their judgment, worthy the same.

In respect to this action of the Association the REVIEW, strictly speaking, has nothing to say, though, of course, not entirely an unconcerned party in the matter, so long as the prize offered by our staff mutually with the Association, refers to the same paper. But the REVIEW cannot remain blind to the error that has been committed, nor to the unjust treatment of the Committee on Prizes, and though, not without feeling much regret at the necessity of doing so, feels constrained to announce its intention of withholding its addition to the prize of the Association, at least until further consideration of the subject.

The greater part of the afternoon session was occupied in the discussion of this subject, and papers which had been expected, and which had been prepared and were in readiness for presentation to the meeting, were left on the table or in the hands of their authors. An excellent appeal in favor of the reorganization of the Army Veterinary Service was entirely ignored. The paper on Contagious Fever of Horses, by the President, was not brought to light, and after an unprofitable and insignificant discussion on the nature of cerebro-spinal meningitis the meeting adjourned.

The selection of the new officers is a very good one, and it is well that it is so, since they will be called upon to perform duties which promises to be of the most serious and responsible nature. The Association now numbers nearly one hundred and fifty members, and if, out of a representation of the veterinary profession of the United States so large as this, the officers cannot devise methods for stimulating their activity and developing a capacity and disposition for useful and interesting work, which must exist, we can but fear that the good name and merited repute which it now enjoys will be seriously jeopardized.

INTERNATIONAL MEDICAL CONGRESS.—When will the veterinarians of the United States enjoy the privilege of meeting their

brethren from abroad in a general International Veterinary Congress? Such a question is naturally suggested by reading the report of the proceedings of the Ninth International Medical Congress, where the physicians of both worlds, comprising, with others, delegates from America, Great Britain, France, Germany, Italy and Russia, came together in the city of Washington, and for an entire week discussed in scientific papers and debates the great and interesting matters pertaining to their calling. Aside from this, and quite as important an effect of the meeting, may be considered the goodly feeling and friendly sympathy established between the practitioners in human medicine of all the leading nationalities of the world, engendered by the hearty and magnificent hospitality they have received from their American brethren, following the cordial welcome extended to them by the President of the United States in their behalf.

This is an inquiry not a little difficult to answer. Yet Veterinary Congresses have been held, and though heretofore they have met only in the cities of Europe, there is no absolute reason why the cities of the new world should be entirely precluded in the selection for some future occasion, if not for the Congress which assembles in Paris in 1889. There is, however, one indispensable preliminary condition to be fulfilled before we can expect to induce the veterinarians of Europe to come to America, and this condition precedent devolves on us to perform—it is that we first go to Europe. At the meeting in Brussels America was represented by barely three veterinarians; the next meeting ought to be attended by a much larger representation. Let every State Veterinary Association, and every veterinary school on the continent, and the general Associations of the United States, appoint delegates, and let these, after first organizing themselves, go to Europe in a body in 1889, to represent the American veterinarian of to-day. We may then reasonably expect the friendly consideration, at least, of a proposition to make the city of Washington the place for convening the next Veterinary Congress.

An important fact which interests us as veterinarians in connection with the late International Medical Congress, is the recognition which it extended to the veterinary profession—an occur-

rence, by the way, of which mention seems to be entirely ignored in the reports we have noticed in our medical journals.

A graduate of veterinary medicine, who presented himself to the committee on admission and asked to be enrolled in his capacity of veterinarian, was at first repulsed, but subsequently accepted, without any apparently serious amount of reluctance, as he reports to us in the following letter:

WASHINGTON, D. C., August 6, 1887.

*Prof. A. Liautard:*

I yesterday applied for admission to the International Medical Congress, upon the representation of being a veterinarian and intimately connected with the sanitary work in this country, and demanded recognition not only for myself, but as well as a representative of the veterinary profession at large.

One of the clerks of registration referred me to Dr. Jos. M. Toner, the registrar, with the statement that he did not think any provision had been made for "horse-doctors." I then saw Dr. Toner, and upon informing him of my official standing, he said that he thought I could be admitted if I could produce evidence of being a graduate of a regular recognized veterinary college. As I don't carry my "diploma" with me, I therefore could not produce the desired requisition. But to-day, meeting Dr. John H. Rauch, Secretary of the State Board of Health of Illinois, and Dr. C. N. Hewitt, the Secretary of the State Board of Health of Minnesota, I was upon their recommendation admitted by Dr. Toner. Furthermore, as both Dr. Rauch and Dr. Hewitt are two of the leading sanitarians of this country, I was not only admitted on account of being a veterinary graduate, but admitted in recognition of the veterinary profession, and they emphatically claimed our right to it.

So far as I know, I am the only veterinarian who holds a membership, but that does not detract from the value of the recognition conceded by the International Medical Congress, which is supposed to represent all nations.

I think veterinarians may congratulate themselves in obtaining this concession to their special art, which is so indissolubly connected with the medical art at large.

Respectfully, M. R. TRUMBOWER.

This is, so far, well, and it is to be regretted that more veterinarians did not follow Dr. Trumbower's example. If this had been the case, a section of veterinary medicine might have been formed, and no doubt would have reported some good work.

We earnestly hope to see this example of the International Medical Congress followed by other organized medical bodies, and that veterinarians may receive the recognition they deserve, but which they have hitherto missed.

PROFESSOR PAQUIN'S LETTER.—A long letter from Professor Paquin, of Missouri, is printed in the present number of the REVIEW. In the first part the Doctor treats the subject of hydrophobia, and refers to a case in respect to which he had kindly asked our opinion, and which we will at a future time utilize in order to answer a question put to the public at large relating to the establishment of a Pasteur Institute in this country.

The second part of Professor Paquin's letter is more important, and has in view the correction of an error which appeared in a former number of the REVIEW. We gladly correct our erroneous statement, and take pleasure in knowing and showing that veterinary medicine is not, after all, held in such low public or governmental estimation in Missouri as to be so entirely ignored that the services of veterinarians are declined on the pretext of want of funds.

According to the letter of Dr. Paquin, Missouri has shown herself far in advance of many of the other and older States of the Union which lay claim to a more advanced civilization. A State which makes appropriations as liberally as the Professor reports, certainly betrays no mean appreciation of the value of the services of veterinarians and of the importance of the place they fill among the useful members of the body politic as sanitarians and guardians of the welfare of the commonwealth.

DIRECTOR NOCARD OF THE ALFORT SCHOOL.—Our French exchanges bring us intelligence of the retirement of Mr. Armand Goubeaux from the General Direction of the Alfort Veterinary School, and the nomination of Professor Nocard as his successor.

To be called, at the age of (about) 38, to fill a position which has been occupied by the Renaults, the Magnes and the Bouleys of the past, men who were already well advanced in years when called to the onerous duties of the place, is an acknowledgment of the most emphatic kind of the consideration which Professor Nocard has won from his contemporaries.

Our intercourse with Dr. Nocard has not been very familiar or frequent, but a long personal acquaintance was not necessary to beget a high appreciation of the man with whose writings we were, with a multitude of others, familiar. And in witnessing

his elevation to the office of Director over one of the most important veterinary schools in Europe, we see a guarantee and a promise of a new impulse to the cause of veterinary science in France, and therefore in the world.

Good Example from America Followed in Europe.—Our German exchanges have brought us the intelligence of the elevation, by Imperial decree, of the Veterinary School of Berlin to the rank of a University, with our excellent friend Professor Muller as Rector.

This is an interesting item, and involves a fact quite confirmatory, and so far highly flattering, of the American view of the estimation to which veterinary science is entitled, inasmuch as in taking the step referred to, the Imperial Government of Germany has merely followed an established American precedent. For years the Universities of the United States have maintained regular veterinary departments, and those of Cornell at Ithaca, in New York, and of Harvard in Boston, with that of the Pennsylvania University in Philadelphia, have illustrated the appreciation which veterinary studies and practice have long since reached in this country.

Age-telling in Old Animals.—Dr. Miller's letter shows, in his own language, "how difficult the test of age-telling in horses is, at times;" and yet a careful consideration of his letter shows that the only important difference of opinion existing among the twelve gentlemen by whom the mouth of the old mare was examined, occurred in respect to the period between "about sixteen" and above twenty-one. The characters of old age after twenty-one are very uncertain, and, to quote the expression of a puzzled student required to give the age of an old subject, about to be destroyed for dissection, the greater part of them may be said to be "*beyond the dentition table.*" And for this reason, perhaps, the nine gentlemen who made the old mare above twenty-one were all as nearly right as could be expected of persons obliged to obtain their knowledge exclusively "out of the mare's own mouth." To determine whether an animal is "sixteen years old or about," is comparatively a much easier task. But again, when the many causes that assist in altering the regular wearing of the teeth are taken into consideration, one need not be sur-

prised at the occurrence of an error, even during adult life, and still less at a more advanced age.

VETERINARY HONORS.—Our veterinary exchanges from England bring us the following interesting item: At the meeting of the Royal College of Veterinary Surgeons Dr. Fleming proposed the name of Dr. Huidekoper, of the Veterinary Department of the University of Pennsylvania, as an Honorary Associate of the College, which was seconded by Prof. Walley and unanimously carried. We offer our sincere congratulations to our confrere for this well deserving recognition of his efforts on behalf of our profession during the last few years.

# ORIGINAL ARTICLES.

## THE NATURE OF THE AMERICAN SWINE PLAGUE

### IN REGARD TO ITS PREVENTIVE TREATMENT BY VETERINARY POLICE AND HYGIENIC METHODS.

BY FRANK S. BILLINGS, D.V.M.

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[Read before the Massachusetts Veterinary Association by its Secretary, Dr. L. H. Howard.]

No disease that occurs in animal life has but one cause. This axiomatic fact applies equally as well to contagious and infectious diseases as to others.

In order that we may be able to prevent a given disease, it is absolutely necessary that we first arrive at a correct conclusion as to its exact and real nature. Hypothesis will not do. Without exact knowledge as to the nature of a contagious or infectious disease, all attempts at its prevention will prove futile. A knowledge of the real nature of a contagious or infectious disease is of far more importance, in considering means to prevent it, than a knowledge of the character of its specific cause—the *causa sufficiens*. We may know *how* a given factum acts long before we may be able to discover the *thing acting*. By removing its means of action we may prevent the action, though the thing itself may continue to exist.

While we may not know the specific exciting cause with regard to a given disease, if we know the means by which it acts, the places in which it exists, which constitute the (so called) secondary, or supporting, or extending causes, we may prevent the ravage of such a disease, without in reality having attained any exact idea of the real nature of the specific cause, other than that it is of a contagious or infectious nature, as the case may be.

Let us endeavor to apply these principles to swine-plague.

In my communication upon the "Etiological Moment" in this disease—the micro-organism—I took occasion to call attention to the fact "that the American swine-plague is an infectious and not a contagious disease;" that in reality "it is a specific septicæmia, of extra-organismal origin,"—that is, that it is due to a specific micro-organismal element, which finds its primary and original locus and means of development in conditions entirely outside of the porcine organism.

I consider the establishment of the true nature of swine-plague of infinitely more importance than the discovery of its specific, inciting cause—more important even than the discovery of a practically possible means of prevention by an artificial vaccine.

Up to this time, all investigators in this country have pronounced the swine-plague to be a "contagious" disease. That opinion is unequivocally wrong. Being wrong, it is not to be wondered at that all attempts at its prevention have so utterly failed.

Law says:

"This disease may be defined as a specific contagious fever of swine."—*Report of the Department of Agriculture*, 1878, p. 379.

Detmers says:

"Swine-plague is a disease *sui generis;* it is communicated by direct (contagion) and indirect infection."—*Ibid*, p. 332.

Salmon says:

"This disease is contagious, and in the majority of cases may be traced to contagion."—*Report*, 1880–'81, p. 13.

Again Salmon says:

"The demonstration of the contagiousness of the disease has

enabled our agriculturists to do something to prevent its spread. Our investigations (!) have shown that swine-plague is a non-recurrent fever."—*Report*, 1883, p. 57.

The assertions of Law and Salmon that swine-plague is "a fever," show a bad want of a proper education in the principles of pathology. "A fever" as a specific disease is a pathological impossibility. The fever is a general phenomenon common to all irritative diseases, whether specific or not. Hence, when accompanied by fever, in common with every other acute infectious disease, swine-plague is not "a specific contagious fever," any more than it is a "non-recurrent fever," while in the majority of cases it is a "non-recurrent" disease.

Detmers, on the contrary, is practically correct in his conclusions, in that by "indirect infection" he means infection pure and simple.

To the unreflecting veterinarian, or non-professional reader, the above may at first appear as an attempt at splitting a hair, but it is far from that; to the correct treatment of any disease—medicinal or preventive—it is absolutely essential that both professional and laymen who may have anything to do with it should know what it is. Without this knowledge, any rational prevention of swine-plague will be found impossible.

A contagious disease is an endogenous disease: that is, one which invariably finds its primary origin in a specific element—also a micro-organism—which, with equal invariability, finds its proto-development within the individual organisms of a given species of animal life.

A contagious disease is communicated directly from one animal to another of the same or a susceptible species. Syphilis, pleuro-pneumonia contagiosa, are examples of contagious diseases limited to a single species. On the other hand, while the second variety are transmissible to a varied number of susceptible species of animal life, still they find their primary development in a given species with an equal constancy to the first named. To this class belong glanders, rabies, small-pox, foot-and-mouth and many other strictly contagious diseases.

The differentiating characteristic between contagious and in-

fectious diseases (aside from the transmission directly from organism to organism) is, that although the specific cause, in contagious diseases, may retain its vitality and virulence, under favorable conditions, for some time outside of the animal organism, still it does not continue its development there, nor does it really infect such extra-organismal material. It simply remains attached to it. It does not find the materials and conditions suitable to support its life and proliferating activities. It soon ceases to be dangerous. It loses its virulent activity and vitality.

The inficiens of glanders does not retain its virulence over forty days when bound upon the nasal discharge, or some other material, from a diseased animal. The rinderpest inficiens does not retain this activity for over six weeks, if it does as long as that. We know little or nothing about contagious pleuro-pneumonia in this regard.

Medical technology and language are used with utter disregard of the common decency of exactness.

Nowhere else is this more apparent than in the use of the words contagious and infectious. In general, no attempt at any logical or scientific differentiation is made. They are used one for the other, in absolute ignorance of their true meanings.

Infectious diseases, or exogencus diseases, are such in which the specific cause—the inficiens—finds its source of primary origin, and support, and the natural conditions suitable to its existence in extra-organismal conditions; that is, outside of any animal organism.

The earth, compost and such refuse materials offer, in general, the conformable physical and chemical conditions to the support and development of the inficiens in infectious diseases.

Vegetable materials grown upon such lands, the earth, or refuse itself, the air and water, contaminated from or by them, form the chief media by which susceptible animals become infected.

According to their character, then, infectious diseases must be distinguished as:

Endogenous or contagious, *per se.*

Exogeneous or infectious proper.

Exogeneous—malarial—infectious, or absolutely local infectious diseases, in which the animal organism plays no part in their extension.

The peculiar or idio-pathogenetic characteristics of the inficiens, in each case, decides the special nature of the disease.

Swine-plague is a disease having a purely infectious character (anthrax, Texas fever, Asiatic cholera, are well known examples of the same class of diseases). It is a disease in which the inficiens finds its primary, original development outside the porcine organism. Genetically speaking, the inficiens is extra, and never of primary intra-organismal origin.

The inficiens finds its suitable media for natural development in the earth and refuse earthy materials, and requires certain conditions of moisture, heat and chemical constituents to its support and progressive development.

These facts established, we have discovered the nature of a given disease, and the key to practical methods of prevention. While we may never have seen the inficiens, we have discovered where it lives and thrives, under what conditions it does this, and by keeping susceptible animals away from such places for a given period, and by altering the conditions so as to render them unfavorable to the existence of the inficiens, by confining the diseased animals, and other precautions to be mentioned hereafter, we have the principal effective means of preventing infectious diseases at our command.

This has been possible with anthrax. Where intelligently applied, localities that were absolutely unsafe for cattle, horses or sheep to graze upon, have been rendered valuable grazing grounds by digging up and burning every cadaver, by the thorough drainage of the land so as to keep the height of the ground water at a low level and by keeping all animals off such land for two years, except those necessarily used to plough it up and expose it to the sun and air several times a year. In general, the dangerous localities are small, and can be fenced in, and by simple lowering of the ground water can be rendered safe in two years.

In order that a susceptible animal shall become infected with an infectious disease of this nature, it is necessary for it to be in

or upon an infected locality, or to come in contact with something derived from such a locality, such as the earth itself, or grains, hay, grasses or roots grown upon such earth. Such diseases are strictly local in their primary origin.

There is a phenomenon, however, in connection with many of these primary local infectious diseases which has led, and, unfortunately, still leads to an immense amount of unnecessary confusion and misunderstanding, which it is very essential should be cleared up.

Attention has been previously called to the fact that susceptible animal organism, in case of primary infection, must be in or upon such infected localities. Such localities form the (so called) fixed or natural centers of infection. These fixed or natural centers of infection are to be looked upon in a far different light than animals infected with a contagious disease, though they also form the only natural centers of primary infection. The primary center of infection in contagious diseases is movable. The dangerous principle bound upon it is not fixed in any given locality. The infected animal in contagious diseases is the primary, while in infectious diseases it is a secondary center of infection. Here, again, we have an animal organism acting as a movable center of infection, *but not contagion*—that fact must not be lost sight of. Such animals can infect other localities, but not other animals directly, in the sense that contagious diseases pass from animal to animal.

The living animal then becomes a traveling medium of infection, and although of itself not directly dangerous to other animals, yet in many diseases such an infected individual is far more dangerous than one affected with many contagious diseases, though it takes longer for the danger to become apparent.

Such an animal can infect the localities in which it comes. While the animal afflicted with a contagious disease can also leave effluvia that may be dangerous for a time, it soon dies out, but this other animal leaves seed that, the conditions being favorable, develops and multiplies, giving occasion to the infection of other animals, and they to other localities, and so the destroyer gradually extends over a country, seldom marking its course by a gen-

eral conflagration, but rather by bivouacks of destruction here and there, which become more and more frequent and near together the longer mankind neglects making proper endeavors to check its course.

It can thus be seen that the regulative and hygienic preventive of specific infectious diseases is, in many cases, much more difficult than the contagious variety. Every spot is a seat of danger, and one that may continue so for months or years where an animal has been that is affected with such an infectious disease as anthrax or swine-plague. Not only that, but, under favorable telluric and atmospheric conditions, the specific cause, the germs, gain access to the air by transportation from the ground, or become attached to the vegetation, and thus the disease may spread in ways mysterious and strange to the farmer and stock owner.

It is sometimes very difficult indeed to decide whether a given disease is contagious or infectious. The opinion of the general practitioner is not worth a fig upon such a subject.

It often happens that a disease extends rapidly over a country among a given species of animals. In this regard I have only to call attention to the horse epizootic of 1872. The world said it was "contagious." It was not! It was infectious. Horses undoubtedly aided in spreading the infecting element, but at that time there must have existed peculiar climatic and telluric conditions, which have not since occurred. There was a common infecting cause to which the equine organism was alone susceptible, that extended from North to South, East to West.

Had it been a contagious disease, it would never have worn its energies out as it did.

Again, in infectious diseases it so happens that under peculiar circumstances there is no doubt that the disease becomes transmitted from one animal to another in the same stable. This fact has led many reputable men to speak of such cases as "contagious," but they are not. The transmission in such cases is not due to the cohabitation in the same building or house, but to some accidental circumstance; some intermediate factor comes into action; accidental inoculation occurs, not transmission per contagion. The sick individual does not convey the disease; some-

thing takes material from it and inoculates another, or the latter is wounded somewhere and inoculates itself with effluvia from such an animal, but direct infection from animal to animal does not occur.

In this way anthrax is conveyed by flies biting a sick animal and then going to a healthy one and sticking their soiled proboscis, with anthrax germs upon it, into the skin of such, and the disease occurs in No. 2, and so it may be carried to others.

Is that contagion?

Or a man has a cut on his finger and has the care of such cattle, and gets some fresh manure on his fingers and dies of malignant pustule.

Is that contagion?

Had the stable been kept properly darkened in the first place, and fly-screens on the doors and windows, the disease would not have been transmitted to the other cattle, and the sick ones could have died among them and no others have acquired the disease, if other necessary precautions as to food, water and utensils had been taken.

In the second case, had the man not had the wound on his finger, or had he had it properly covered and been more cleanly about his work, he could have worked among anthrax diseased cattle indefinitely and remained well.

(*To be continued.*)

## COMPARATIVE LESSONS OF BRAIN WOUNDS.

By Dr. G. Archie Stockwell, F.Z.S.

(Written especially for the American Veterinary Review.)

Comparison of the crania of vertebrata reveals in each instance a citadel carefully walled and fortified about, to meet the necessities of the class or types in protecting the organ of intelligence and will. The very points that, to superficial observation, would be deemed the most vulnerable, on closer and more careful inception prove to be built up and buttressed in an extraordinary manner, with here an arch, there a ridge, again an angle or pro-

cess, in each and every instance securing to the part a *maximum* of strength, with a *minimum* expenditure of material; then, as if this were not enough, the whole is usually supplied with a movable *glacis*, so to speak—the scalp—that is well calculated to divert approach and convert the direct to an indirect assault. Herein lies the comparative infrequency of traumatic injuries of the head as with other and less exposed portions of the creature economy.

Because it is the seat of voluntary impulse and the prompter of the various functions that collectively maintain the mysterious phenomena of Life, until within a half decade the brain has received but trifling, or at least superficial, attention at the hands of the surgical pathologist. It is only yesterday, as it were, that the theory of non-interference in traumatic lesions of the head was carefully inculcated and persistently insisted upon, and even to-day nine-tenths of the medical profession are blinded by this ancient *fetich*. It was, and yet is, believed that the nervous system is a structure so frail, complex and uncertain as to be beyond the delicacy of the human hand and mind, and consequently not to be meddled with even in attempt to restore and further its functions.

Even the pagans of Greece and Rome were superior to us in this respect, for Celsus describes the symptoms of abscess and blood clot within the dura, and an operation for relief; and in Egypt have been found mummies exhibiting marks of a trephine that manifestly had been applied for other purposes than fracture.

With the decline of the ancient colleges, art and science fell into decay, and it was the early Fathers of the Church who, distorting the Esoteric doctrine of the Mysteries that yet lingered as mere superstitions, located a spiritual and Divine essence within the brain, and promulgated the dogma that to meddle with this "seat of soul" was an "insult to Deity."

The difficulty of ridding the human race of the superstitions of centuries is well exemplified by the indifference with which recovery after severe injury with loss of brain substance has been regarded; instead of being deemed natural results of reparative

processes worthy of imitation and fostering, such were only "wonderful" or "phenomenal." No conclusions were offered or drawn; the lessons inculcated by Nature were ignored, and all bowed down to the miraculous, forgetting the teachings of the Greek school—*Thaumata moris*—"Miracles for fools"; and at last, when a few bolder spirits ventured to suggest that the nervous system might be equally tolerant with other tissues and organs, and that within itself was contained the same means of reparation and reconstruction, they were derided and laughed to scorn. Happily common sense is at last in the ascendant, and it is safe to predict that the day is not distant when the brain will be as freely amenable to surgical procedures as the organs of the abdomen.

Before the brain can become the seat of traumatic injury, its protecting walls must be penetrated, and accordingly we find three phases of fracture: of the base, of the vault, or of both. By authors and teachers the first and last are held "invariably and necessarily fatal"; this is the testimony of Erichsen, Wood, Cooper, Neudorfen and hosts of others, and is the more remarkable in that such premises have been *practically* disproven. There is scarce a well-appointed anatomical museum in the United Kingdom or in the United States that does not present crania exhibiting repaired basal fracture that occurred months and even years prior to demise, and that too (in the few instances where the history could be traced) with so little influence upon life and function as to pass wholly unrecognized. Farther than this, the subject of basal fracture does not invite attention in this connection.

Again, fracture may involve the outer, the inner, or both tables.

The first, as a special lesion, does not invite comment, since its relations to brain injury are merely secondary. The two latter, while demanding the closest attention, may, for all practical purposes, be held identical, the results, and even the treatment, being the same.

Fractures involving the inner (or inner and outer) table, almost invariably are attended with extravasation of sanguinous

fluid within the cranial cavity, which may present itself in one or more of five situations: 1. Between the dura mater and the osseous vault; 2. In the cavity of the arachnoid; 3. In the pia-mater; 4. Within the substance of the cerebrum; 5. Within the ventricles. And the relative frequency thereof is in the following order:

Cavity of arachnoid; between dura and skull; in the pia-mater; in brain and ventricles.

Extravasations into the cavity of the arachnoid necessarily have their source in the vessels of the pia mater, in the superficial veins, or in the great sinuses, and arise with apparent equal facility from slight or severe wounds. Those between the dura and skull originate from small arteries passing from the membrane to the osseous vault, from the middle meningeal, or from the venous sinuses, and may develop suddenly or slowly, and in greater or less amount, according to circumstances. Hæmorrhages into the pia, and into the ventricles and substance of the brain, are invariably the sequel to laceration of cerebral substance.

Coagula within the arachnoid and pia are especially prone to cover considerable superficial areas, and between the dura and vault to speedily take on decomposition whereby are developed cerebral and meningeal complications with fatal results. In the former, prognosis is always grave; for even should not death immediately supervene, the attending symptoms of nerve irritability, such as migraine, epilepsy, insanity, etc., etc., render the sufferer a burden to himself and to others; and while it has been claimed that absorption may take place within the arachnoid, the physiological relations wholly preclude such supposition! However, extravasations beneath skull and within the arachnoid have been removed by operative procedures, and with little difficulty or danger; and for this reason this portion of the subject may also be dismissed to discussion on hæmorrhage and coagula within the brain and ventricles, to meddle with which is almost universally deemed unjustifiable, even to criminality.

As a sequel to fracture and extravasation, we may have conditions occurring within cerebral substance as follows: 1. *Concussion;* 2. *Contusion;* 3. *Compression;* 4. *Pachy-meningitis;*

5. *Leptomeningitis;* 6. *Intru-dural suppuration;* 7. *Encephalitis;* 8. *Abscess;* 9. *Pyæmia;* 10. *Hernia-cerebri.*

*Concussion*, if unaccompanied by hæmorrhage, is the natural sequence of injury or infraction of cerebral substance or its membranes. *Contusion*, on the contrary, designates a condition resultant upon rupture of blood-vessels, or laceration of the more minute and microscopic brain elements. *Compression* may result from effusion of blood, depressed portion of punctured vault, entrance of foreign substances, hyperanemia, or exudations. *Pachymeningitis* is critically described by chronic and local inflammation of the dura resulting (secondarily) in thickening, new formation, and (subsequently) necrosis of the osseous vault. *Leptomeningitis* indicates acute or sub-acute inflammation of arachnoid and pia-mater arising from irritative agencies. Intra-dural *suppuration* is a common sequel of putrescent coagula, necrosed bone, or other irritating and foreign substances. Traumatic *encephalitis* may develop from concussion or laceration either with or without deposit of bone spiculæ and extraneous matters. *Abscess*, *pyæmia* and *hernia-cerebri* are secondary factors, hence of connective and subjective importance merely. The direct complications of cranial fracture, however, are *encephalitis* from injury of cerebral substance, and *inter-cranial hæmorrhages.*

From exhaustive and carefully compiled statistics prepared by Wharton, of Philadelphia, I have been able to formulate the percentage of fatality attending the different classes (regional) of perforating injuries of the human cranium, as follows:

Orbital, 17–18, or 94 per cent.
Sphenoidal, 4-5, or 80 per cent.
Occipital, 2-3, or 66 2-3 per cent.
Parietal, 1-2, or 50 per cent.
Frontal, 3-7, or 43 per cent.
Temporal, 2-5, or 40 per cent.

The showing is by no means satisfying.

Examining the statistics more critically, I find the sub-diploetic or dural surface of the skull is invariably the greatest sufferer, in obedience to the well-known philosophical law, that injury follows in the *line of extension* rather than that of compression.

When fracture is not promptly followed by collapse and dissolution, the first question that presents itself is, the feasibility of surgical interference, including operative measures for the relief of compression.

From various experiments conducted on lower animals, especially in connection with intra-dural inoculations and the artificial production of suppuration, abscesses and compression, I am satisfied that operative interference, in a majority of instances, is not only feasible and justifiable, but desirable and imperative, even to the free use of the knife *upon* the brain, and *within* its cortical substance!

If the evidences of compression are continuous and urgent, as manifested by unconsciousness, coma, stertorous respiration, dilated pupils and motor paralysis, they may justly be attributed to depressed bone or the introduction of some substance from without. If the evidences appear only after a lapse of some hours, we are well grounded in surmising them the result of *hæmorrhage;* if delayed for some days, to *pus.* In either case compression will be uniform, owing to the adaptability of the cerebro-final fluid, and its obedience to the well-known law that fluids under all circumstances maintain their equilibrium. Again, where the blood-vessels are largely deprived of their contents, we have *anæmia*, whence unconsciousness, coma and labored respiration; and when the corpora quadrigemina and third pair also suffer, dilatation and paralysis are to be expected. Undoubtedly, in the great majority of instances compression is due to extravasated blood, or the formation of purulent fluid; and so far as can be gathered from statistics, it would seem that at least *six-tenths* are due to the latter cause.

Following statistical evidence further, we find pus forms between the dura and skull in *five* per cent. of the cases only, and that in *twenty-five* per cent. it arises from suppurative meningitis, and in *seventy* per cent. develops an abscess with the cerebral substance!

"Symptoms of purulent fluid within and about the meninges commonly occur between the *sixth* and *twenty-first* days; but those of cerebral abscess, only between the *fourteenth* and *twenty-fifth* day."—*Naucrede.* (!)

If pus manifests itself within the cranium, what is the result? In spite of contrary suppositions, there is no authentic case on record wherein a collection of purulent fluid within the arachnoid has been absorbed, and the greatest of surgical rarities is spontaneous evacuation of cerebral abscess!

It may be admitted that, under conservative treatment, in some few isolated instances, where pus had collected near the surface, it also succeeded in penetrating the obstructing barriers and securing for itself an outlet external to the skull; but such inculcates no lesson or example (other than resort to the trephine and knife) worthy of dependence; and should it fail to secure such outlet, as is necessarily the result in the majority of instances, the retained fluid must needs be a source of incalculable and grave mischief. The statistics of such conservatism exhibit a death ratio of *seventy-four* per cent. Neudorfen, who is one of the foremost advocates of operative interference, exhibits tables wherein the death rate is but *fifty-seven* per cent., and with the disadvantage that such interference in the majority of instances was delayed until the last hour. And yet, with this discrepancy (*seventeen* per cent.) in the favor of surgical measures, we find the multitude of surgeons, Ashurst among others, persistently and dogmatically inculcating strict conservatism and dependence upon the operations of nature. Per contra, I am glad to note that such eminent authorities as Gross, Liddel and Roberts have recently entered the lists in endorsement of Neudorfen.

(*To be continued.*)

## INOCULATION AGAINST ANTHRAX AND ITS VARIOUS FORMS.

(Abstract from the Report of Prof. Robertson to the Royal Agricultural Society.)

The experimental work undertaken in connection with the above named diseases of farm stock was specially directed—1. To test the statements regarding the efficacy of Pasteur's preventive for anthrax. 2. To discover the best means of carrying out protective inoculation for the disease recognized in Britain by the

name of "quarter-ill"—"symptomatic anthrax." The latter being, in the meantime, regarded of greater importance, had directed to its elucidation the larger share of attention.

1. As to the claims of the Pasteurian prepared "vaccine" to serve as a preventive against the attacks of anthrax: Having obtained from the accredited agents in Paris a supply of this material, it was first examined microscopically, and tested on small rodents, to prove the existence of organisms and its possession of active properties; in both respects it proved true to description.

On the 13th of October two young bullocks had injected into their subcutaneous tissues a dose of "premier vaccine," and on the 24th each animal was inoculated with the prescribed amount of "deuxieme vaccine." It is to be remembered that two inoculations, with an interval of ten days between each, are deemed necessary to obtain protection. Neither of these inoculations produced appreciable general disturbance. On the 10th of December some virulent material obtained from the spleen of an ox which had died from an attack of anthrax, after being diluted with distilled water, was injected into the subcutaneous tissues of one of the oxen "protected" with Pasteur's vaccine, and of another ox which had not been so protected. There was no appreciable general disturbance in either of these animals.

Thermometric observations, however, showed a very high temperature in the unprotected animal, remaining, with slight variations, up to near 107° Fahr., till the 16th. That of the protected ox became elevated on the day following to 106° Fahr., after which it receded almost immediately to normal. A rabbit inoculated with the same material and at the same time, died of anthrax in eighty-five hours after the operation. On January 28th, on obtaining virulent material from one of a number of cattle which had perished in an outbreak of anthrax at Chelmsford, thirty minims of a mixture of this and distilled water was injected into the connective tissues of the remaining ox protected with Pasteur's vaccine. Beyond the fact that the temperature rose on the following day to 106° Fahr., and a little swelling appeared at the point of inoculation, there was nothing worthy of remark till February 13th, when an abscess formed at the seat of

previous swelling. This was opened in a few days and the pus evacuated. A rabbit subjected to the same test died of typical anthrax in seventy-eight hours.

The foregoing cannot be regarded as absolute and in itself sufficient proof of the protective power of the Pasteurian vaccine, though it is certainly favorable to it.

2. Our attention was now turned to discover if any reliable means obtained by which protection could be secured against fatal attacks of that disease recognized as "quarter-ill." This is particularly an affection of young stock; it is extensively distributed over Great Britain; it is generally well recognized, and is very fatal. From the changes which occur in the soft structures, and the rapidity and fatality of its issues, it has for long been confounded with pure anthrax. It is, however, now believed to be essentially distinct. Both are what are known as microbic diseases, *i. e.*, they owe their existence to the entrance into, and growth in the animal tissues of a specific micro-organism. Each disease is now recognized to be dependent for its existence upon its own individual microbe.

Before proceeding to test the efficacy of certain modes of preventive inoculation which had been stated to be effectual by the French experimenters, MM. Arloing, Cornevin and Thomas, we determined to satisfy ourselves of the asserted contagiousness of this malady. This was demonstrated to our satisfaction, by injecting one drop of muscle-juice from an animal which had succumbed to the disease, into the subcutaneous tissue of each of two guinea-pigs, and five times this amount of the same material into the haunch of a young bullock. The guinea pigs died from quarter-ill in ten and a half and thirty-six hours, respectively, the ox in thirty-seven and a half hours. Muscle juice from the local lesions of all these cases proved, by further testing, that it contained the specific microbe.

Having considered and examined the several accredited experimental modes said to afford protection against this disease, two were selected for trial as more likely than the others to yield the wished-for results. The first which we took up was that of employing the dried muscle-juice of the local lesions of the dis-

ease as a material for inoculation. This, it may be mentioned, is the means recommended by the French experimenters already named, and extensively employed in France. This material, or "vaccine," is now an article of commerce in France, so, having ascertained by letter from M. Arloing that M. Fromage, of Paris, was his agent for its sale, we obtained from this source the requisite supply.

Through the kindness of C. de Murietta, Esq., of Wadhurst Park, Sussex, six young cattle were placed at our disposal for experimentation.

On the 21st of August, Professor Penberthy inoculated these animals in the manner prescribed, with M. Arloing's vaccine, the second inoculation being executed ten days afterwards. These animals were then, with six others, placed in a pasture traditionally notorious for the fatalities of quarter-ill occurring in it. The internal temperatures of the animals were regularly taken and registered, but these showed little variations from normal. Two months elapsed without appreciable change in the animals. On the 30th of November three of the vaccinated and three unvaccinated animals were tested by an injection of 4 C. C. of virulent muscle-juice taken from a fatal case of quarter-ill. Save slight lameness of one of the vaccinated and one of the unvaccinated beasts, no unnatural effects followed.

A further testing of the remaining vaccinated and a similar number of unvaccinated cattle was attended with like negative results. That the material employed in this testing was of a virulent nature, was proved by its producing quarter-ill in a guinea-pig on which it was used, this creature succumbing in twenty-eight and a half hours.

In the light of other experiments which followed, the results of these at Woodhurst Park are not easy to explain. The susceptibility of animals to contract this disease we know is influenced by conditions residing in the animals themselves, as well as by such as operate from without, but whether these cattle were rendered more refractory from being located in this particular situation, where the disease is said to have an abiding existence, is yet uncertain.

Not being satisfied with this trial of M. Arloing's dried powder, a fresh quantity was obtained from Paris, and on the 10th of January a heifer and steer, about ten months old, were inoculated at the veterinary college, the operation being perfected by a second operation after the prescribed interval.

The testing of these fresh vaccinated cattle was rendered possible by our having to investigate an outbreak of quarter-ill among the young stock of Mr. Godman, Horsham, who, having lost one animal, was desirous of having his remaining ones preventively inoculated. The case which had proved fatal being considered a typical one material was taken from it with which to test our vaccinated animals at the college. Both the cattle and one guinea-pig, unprotected, had injected into their connective tissues a little of the muscle-juice obtained from the dead ox. In all these animals this inoculation proved fatal. The guinea-pig died in twenty-four and a half hours, the steer in forty-four and a half hours, and the heifer in forty-seven hours. After death, examination disclosed well-marked lesions of quarter-ill.

Being now rather dissatisfied with our trials of the dried muscle-juice as a protective "vaccine," attention was turned to the second method already referred to for producing immunity, viz., that of intra-venous injection of simple diluted virus. Experimentation on this system was rendered possible by the generous offer of Major Algernon Percy, of Hodnet Hall, Shropshire, to place certain animals at our disposal for this purpose. The opportunity to commence this trial was afforded on November 11th, when, in response to a telegram from Major Percy, Prof. Penberthy proceeded to Hodnet. On the morning of the 12th, in the presence of many interested in the experiment, four calves, duly marked for identification, had a regulated quantity of muscle-juice, previously mixed with water, injected into the jugular vein. This muscle-juice was prepared by straining through coarse linen, and was conveyed into the blood stream by means of a hypodermic syringe. Following the operation, the four calves, with a similar number of uninoculated, also marked for identification, were turned into a pasture and treated in every way alike, except that the temperatures of the inoculated were

taken twice daily for eleven days. From these latter observations it was found that the heat regulating function was scarcely disturbed.

On the 25th of November, from the death by a natural attack of quarter-ill of one of the uninoculated calves, and of another heifer at Hodnet, an opportunity was given to test the efficacy of intravenous inoculation. In the presence of several interested gentlemen, some of whom had witnessed the inoculations on the 12th, Mr. Penberthy injected, with all antiseptic precautions, into the subcutaneous tissue of the limbs of the remaining seven calves a considerable quantity of virulent matter taken from the muscle of a still warm heifer which had died from quarter-ill. The seven animals were then placed and kept together in a meadow under identical conditions. The results of this testing were: Of those inoculated intravenously on the 12th of November, none appeared to suffer in the slightest degree; of the three unprotected, two sickened on the 26th, one of them dying on the 27th, the other on the 28th. Both of these, on being examined after death, were stated to have exhibited well-marked lesions of quarter-ill. The third of the unprotected calves showed, on the 28th, a crepitating swelling at the seat of inoculation, and was dull and unwell on the 30th; a well-defined swelling existed at this spot, which gradually softened on the subsequent days, the calf returning to a state of health.

In order to prove the practicability of the intra-venous method of inoculation, on December 22d, Prof. Penberthy, with the aid of Mr. Tomes, the bailiff of Hodnet, inoculated as described twenty-four young cattle. The operation lasted about an hour and twenty minutes. On this occasion, in every case the injection was done by piercing direct through the skin into the lumens of the vein. These animals, Major Percy reports, have shown no signs of indisposition after the inoculation, nor have any cases of quarter-ill appeared amongst them.

The practical outcome of this work appears to be, that it ha made clear the fact of the communicability by inoculation of the disease known in England as "quarter-ill," and its identity with that treated by MM. Arloing, Cornevin and Thomas, as "charbon symptomatique."

That without further proof of its efficacy we cannot recommend the use of M. Arloing's dried muscle-juice as a means of protecting cattle from the disease in Great Britain.

That inasmuch as some of our experimental guinea-pigs, after being "vaccinated" with muscle-juice subjected to the influence of a lower temperature than that recommended by M. Arloing, resisted the action of the injected virulent matter, some of which killed cattle and other guinea-pigs vaccinated with Arloing's powder, further experimentation in this direction should be made.

That the Hodnet Hall experiments go far to prove that the intravenous injection of considerable quantities of fresh virus is protective, and, to a large extent, practicable. The greatest drawback to its general adoption seems to be the necessity for fresh material with which to inoculate. This difficulty is not really so great as at first sight may appear. It has at least this in its favor, that it entails the existence of the disease on the estate, and does not encourage the chance of introducing fresh disease from without, as may be asserted of some systems of inoculation. In view of the results already obtained, we strongly advise the further and fuller adoption of this plan.

## AMERICAN VETERINARY COLLEGE.

### HOSPITAL DEPARTMENT.

#### A COMPLICATION OF CAUDAL AMPUTATION.

By Dr. J. Heulsen, Jr., House Surgeon.

A bay gelding, fifteen hands high and four years of age, entered the hospital on June 27th, with the following history:

Two weeks previously the tail had been amputated, about fourteen inches from the base, by a horse dealer, who, to stop hæmorrhage, applied a ligature of twine, which was allowed to remain twenty-four hours. The animal was then put to work, and ten days ago, the owner says, the tail commenced to swell until, becoming alarmed, he sought treatment.

On the day of entrance to the hospital the tail was found swollen to twice its natural size, and the hair matted with a thick,

greasy discharge. Examination showed throughout its whole extent an infiltration of pus in the form of numberless small pustules or abscesses, many of which had opened and were discharging.

Symptoms of approaching gangrene seemed plainly visible: six inches of the end of the stump was congested, of a dark-reddish coloration; cold to the touch; sensibility not entirely diminished, and with an apparently irregular line of demarcation of healthy and diseased tissue.

At the end of the stump, the black, necrosing portion of a coccygeal vertebra protruded one and a-half inches.

The disease seemed also to be making rapid strides anteriorly to other parts. The perineal region was swollen and softish to the feel, and lancing discovered a large pelvic abscess, opening above and to the left of the anus, the track being found with the probe to extend ten inches inwards and upwards into the pelvic cavity.

In fact, the general appearance of the parts was such as to preclude almost all possibility of successfully coping with the disease.

Treatment was undertaken, however, more as a matter of experiment and at the owner's urgent request, than with any great hopes of recovery.

The chief danger now to be apprehended was septicæmia. Temperature, 104°; pulse somewhat weak, but normal in number of beats, and respiration normal. Appetite good, and the discharge from the wound had so far been healthy.

Two small abscesses near the base of the tail were also lanced with the bistoury, with a discharge of about two ounces of healthy pus, and injection of carbolic solution into the cavities. The parts were then thoroughly cleansed with the solution, and a pad of oakum and bandage applied.

*June* 28.—Temp., 102°; resp., 20; pulse normal, full and strong.

Appetite still good. There is quite an abundant discharge found on removing the dressing. The hair is commencing to loosen and fall out, and to facilitate dressing it was at once

clipped, and the stump, with its raw surface and distorted pro portions, revealed fully to view.

Two more abscesses were opened near the base, one above and the other below, discharging about two ounces of pus.

It seems as if the whole tail were composed entirely of small multiple abscesses; for passing the hands, with pressure, from the base to the end, caused small discharges or oozing of pus from the numerous openings. None of them were large, and many connected with one another. From the pelvic abscess there is an abundant healthy discharge, and the portion mentioned above as showing signs of gangrene, is in same condition.

To-day dressed twice with injections of carbolic solution, and thorough cleansing. The piece of necrosed vertebra was withdrawn with the bone forceps, the cavity packed with oakum, and edge cauterized with nitrate of silver.

*June* 29.—Temp., 103–1°; pulse, 48, strong; respiration a little increased. Appetite continues same. The condition of the tail still warrants no better prognosis of the case. Abundant discharge, and dressing twice a day.

*June* 30.—No appreciable difference; perhaps less tumefiied. Discharge healthy. Temp., 102°; pulse, 40; resp., 20. Same treatment.

*July* 1.—Swelling decreasing, and healthier appearance; not so congested and blackish. Discharge continues same. Temp., 103.2°; pulse, 48; resp., normal.

*July* 2.—Temp., 102.3°; pulse and respiration normal. Continuing the same treatment of pressing out the discharge from the great number of abscesses; new ones continually developing, and incisions made to enlarge the openings of many of them. About the same appearance as yesterday. ℥ ii. quinine sulph. administered three times to-day.

*July* 3.—Temperature, 102°. Same treatment. Slight improvement.

*July* 4.—Swelling and discharge decreasing, and healthier appearance. The case is assuming a different aspect, with reasonable hopes now of recovery. Temp., 101.2°.

*July* 5.—Temp., pulse and resp. normal. Appetite good. Discontinued quinine.

*July* 5 *to July* 10.—Gradually improving; decreasing in size, and healthy discharge. New abscesses opened every day, and many healing. Same treatment in dressing. Temp., resp. and pulse normal; appetite same. The pelvic abscess has ceased discharging, and is apparently closed. Prognosis now favorable, and it is only a question of time.

*July* 11.—Only three or four abscesses now that are discharging, but of course others developing. The granulations at the end of the stump are bulging, and nitrate of silver or chloride of zinc is applied. The tail is of nearly natural size, though still of ugly appearance.

*July* 12 *to* 21.—Improving. Tail assuming more and more its natural condition, though still of ugly appearance from loss of hair. One or two small abscesses being opened every day, and dressing once a day; chlor. zinc solution mostly used to cauterize openings of abscesses and end of tail.

On July 18th another large pelvic abscess discovered on the right side of the anus, with a track leading upwards and inwards, about six inches long, but discharge is scanty.

*July* 22 *to Aug.* 9.—Very little discharge; tail almost normal in appearance. A new abscess developing almost every day, and the old ones nearly all healed.

*August* 18.—About same condition. Appetite good. The stump is nearly all healed, except the end, which still presents granulating surface, and will take some weeks yet to recover.

The chief blemish now considered is the loss of the hair, which is growing very slowly, and only in patches; but the owner, by the resources of art, will be able to overcome this difficulty, and in a short time we shall have the pleasure of seeing our patient taken from our care, ornamented with a beautiful and artistic caudal appendage.

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## CASE DEPARTMENT.

### VOMITION IN THE HORSE.

By Dr. W. A. Speer, V.S.

I recently attended a case that might be of interest to the readers of the Review. The subject was a Texas pony. After being

driven twenty miles evinced symptoms of great pain by rolling and perspiring profusely. When made to get up he began retching and presently the act of vomition was profound, in which partly masticated hay and oats were discharged through the nose. Thinking I had a case of rupture I did not give anything internally, but administered morphia, grs. iii. hypodermically. In half an hour the retching ceased, when I gave soda hyposulphite and an unfavorable prognosis. The next day I visited the animal, expecting to find it dead; but it was alive, though very dull. Stimulants were given and the second day the animal was put to work.

## CORRESPONDENCE.

### MISSOURI RECOGNIZING THE VETERINARY PROFESSION.

*Dear Sir:*

Pardon me for not replying sooner to your favor of the 29th July. I have been extremely busy in my official capacity these two months, and hence my delay.

I thank you sincerely for your advice regarding Pasteurization against hydrophobia, as practiced in New York. I am well aware that, to have success with it, the series of operations must be performed with the greatest care and with perfectly good and safe virus-vaccine. During my stay in Paris last year I carefully studied the treatment for several months at Mr. Pasteur's laboratory itself, where I had the privilege of attending once or twice a week the conferences given to a few at this institution by Dr. Perdrix, one of Mr. Pasteur's chief assistants and late of Koch's laboratory. The cases I telegraphed you about were doubtful. I was absent when a child belonging to Prof. Buckmaster, of this place, was bitten on the hand by a dog running at large through the country, and which had been seen to bite horses, cows, etc., on its passage. It was a young shepherd dog and did not have very dangerous teeth. I found out since that another dog with which the would-be rabid one had a fight came out without a scratch. When I arrived it was too late to inoculate anything

with the spinal cord or bulb of the mad animal, as it was about totally destroyed (the subject having been killed days previous). Thus I was left without anything reliable to form a diagnosis. But the members of the family were greatly excited, and so I told them that for safety, and to ease their minds, they might resort to the only good preventive treatment known, "Pasteur's inoculation." It was then that the family desired me to find out whether it was practiced in New York. Therefore, knowing you would advise me safely and cheerfully, I wired immediately.

I hardly think that the dog in question was rabid.

While I write this let me say a few words to correct a statement in the last number of the VETERINARY REVIEW, to the effect that Missouri appropriated nothing at the meeting of its last Legislature for the State Veterinary Service.

This is far from being a fact. Although this State is comparatively quiet over her results in the line of veterinary science, it were ungrateful to allow the country to believe that she is backward in this respect. In fact I dare say that in the same length of time, and with as few veterinary workers, no State or Territory in the Union has done better for the protection of her live stock through science, and none have recognized more rapidly and more substantially the value of the educated scientific veterinary practitioner. Let me explain, and you and your readers may judge for themselves.

In the spring of 1885 I had the honor of being appointed State Veterinarian under a crude and almost impractical law just enacted. I worked two years under it and notwithstanding its very difficult sections, I had the pleasure to show, at three months intervals, that many cases of glanders, black-leg, etc., etc., had been successfully attended to as the nature of the maladies demanded. Nine or ten months of labor seemed to please the authorities, and they began to study the subject a little more closely. In the meantime your humble correspondent had about a dozen opportunities to address farmers' and "agriculturists' institute meetings." There various diseases were discussed, and sometimes prescribed for free of charge in a friendly manner when no regular veterinarian was in the neighborhood. All this was done under

the management of the State Board of Agriculture. By degrees we managed to get the people interested by these labors, reports and writings, and in February, 1886, the University Board of Curators, with consent and endorsement of his Excellency John S. Marmaduke, Governor of the State, sent the State Veterinary Surgeon to Europe to study contagious diseases more closely and to investigate and study Pasteur's methods of investigating them. This officer was abroad seven months, all the time under salary.

This year a report of the work accomplished in the last two years was presented to the Legislature. Your humble friend went before the Committee of Agriculture, and succeeded in having passed a much better, infinitely better—although not yet what is needed—State veterinary sanitary law. A special law to cooperate with the Bureau of Animal Industry and to deal with contagious diseases of live stock outside of Missouri, such as Texas fever, pleuro-pneumonia, etc., was also presented to the Legislature at the same time. It was modified a little and passed the House with but five votes against it, I think. It then passed two readings in the Senate and would undoubtedly have become a law had not the Senate adjourned in a wrangle over a railway act, with a great deal of unfinished business, among which was this act.

Surely this shows an appreciation of veterinary science in a very short time. For in April, 1885, nothing at all existed as a veterinary sanitary law, and nothing was known in that line among the legislators. Dr. Trumbower at Fulton during the pleuro pneumonia outbreak was the first to open the eyes of the people of Missouri regarding veterinary science as useful to save the country many almighty dollars. In this new law the legislators not only provided for the salary of the State Veterinarian, but also appropriated this year $2,000 for his traveling expenses.

Nor is this all. In response to a plea for the study of the obscure diseases of our live stock the Legislature appropriated $5,000 for the equipment, etc., of a laboratory for the State Veterinarian. This is all that was asked. The laboratory will soon be equipped now. It consists of six fine new rooms for small and large animals and for work in the new horticultural building of the State University (agricultural college farm).

And besides all that, a great pressure was brought to bear on myself and others to establish a veterinary college at this point in connection with the medical school of the State University. Here I was placed in a rather embarrassing position, as very influential friends of this institution and of myself, including the president, were the instigators of the plan.

The first reply to the matter was that no such college should exist unless it had a full faculty and hospital accommodations. To this they (the instigators) agreed, but they thought it would cost comparatively little. I then wrote an estimation of the cost, and of course it was thousands of dollars above the supposed cost of the contemplated institution. But even this, it was urged, might be provided for by the Legislature. I feared, however, that it would jeopardize other demands. At last the State Veterinary Association had a meeting at Columbia and the subject was laid before this body by the most forward supporters of the plan.

The matter was discussed in a friendly spirit by the medical faculty, the President of the University and the members of the society. Finally, on motion, the chair appointed a committee to investigate the question and report to the University authorities. The report was adverse to the plan and this ended the matter. I may say here, in justice to myself, that I emphatically refused my consent to establishing a college with five or six physicians as teachers and only *one veterinarian*, although in my position I could not present any serious objection to the State establishing such a college if she did it on a solid basis. But I see no need for such an institution here under the circumstances.

Now this attempt on the part of the University was thought by some of my friends to be my work. If it was, I must say the work was accomplished without any personal motives and without any effort upon my part towards that end. It shows one thing, however, no matter what the good veterinarians of Missouri and other places may think; it shows that the high educational centres, supported by an agricultural State, have understood that veterinary science is useful and honorable, and that it should be fostered by all means. We have in this State a few graduates only.

In some cities there seems to be a sufficient number. But all are hard working and skillful veterinarians who are daily bringing the profession to a higher and higher professional and social standard.

Pardon this long letter. I felt that you should know that Missouri is responding to the demand of the REVIEW, "raise the profession to where it properly belongs."

Pardon me also for personal allusions. I have been so closely connected with all that I explain herein that I could not help them. If you find anything in this worthy of publication you may extract them for the VETERINARIAN REVIEW. Yours truly,

P. PAQUIN.

P. S. A chair of comparative medicine (pathology of animals compared to man, etc.) has been established at the University Medical School as a result of discussions above stated.

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## GUESSING AN OLD MARE'S AGE.

*Editor American Veterinary Review:*

I enclose herewith a slip of paper for publication in the REVIEW, interesting from the fact that it shows how difficult it is for persons to tell the exact age of a horse after having passed into its teens or through them. The subject was a bay mare that I have known from colthood and know her to be at least 29 years of age, she having been broken about the beginning of the war, 1861. She was then owned by the father of the present owner, near Hightstown, N. J. She is now in the son's possession at Asbury Park, N. J., and I had her brought to the meeting of the New Jersey Veterinary Medical Association for the purpose of having the veterinarians look at her mouth and tell her age. Twelve of those present looked at her mouth and wrote the age on a slip of paper, so that no one knew what any other marked until all who wished had given an opinion, when the slips were opened by myself, and they read as follows:

16—Non-graduate.
16—Graduate of the New Jersey School, of Dr. Smith, of Trenton.
27— " " " " " " " " " "

21—Graduate of old Philadelphia School, of Jennings and others.
23— " " Columbia Veterinary College.
22— " " " " "
22— " " American " "
25— " " " " "
24—Non-graduate.
26— " "
17— " "
26— " "

Of those who gave an opinion four were graduates of colleges and one of the New Jersey Veterinary School, which was located in Trenton some years ago by Dr. Smith. All were practical veterinarians or graduates.

The owner says the mare is 30. I think her but 29, as I well remember her as a colt being just broken at the beginning of the war. Very respectfully yours, W. B. E. MILLER, D.V.S.

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## ON VETERINARY LEGISLATION.

*Editor Review:*

In the last number of the REVIEW Dr. Peabody has considerable to say about veterinary legislation, much of which is all right in its place; but there is one portion of his letter that I consider is intended as a whack at me. I refer to the second paragraph.

While I cannot deny the fact that I have too often occupied the pages of the REVIEW on this subject, I can and wish to most emphatically deny that I have ever done so "to get a little cheap notoriety." It has neither been cheap or satisfactory, but the reverse, and is now to me a most unpleasant subject—so much so that "veterinary legislation" acts on me as a strong emetic. This acknowledgment will no doubt be gratifying to those gentlemen (?) who were instrumental in making it so, but let me say right here that "those who laugh last laugh best." If the institution known as the New York County Veterinary Society cannot be called a *mill*, what else can you call it? It is run by two or three men for the sole purpose of selling so-called diplomas or certificates. They examine anyone they please, give no lectures, graduate anyone they think proper in thirty minutes for a go d

money consideration and divide the larger portion between the so-called examiners.

It is true the law as passed is a miserable failure; but why? Because the profession of this State is cursed with men who are lost to all sense of feeling, I was going to say, but they never knew what that was. I tried to do some good. I failed. Why? I ask again. Because I never had the hearty support of the profession. Why I cannot tell, except that many might have looked at it in the same light that Dr. Peabody appears to, and because of such apathy they allowed a few to have their own way.

Better men than I have failed with such odds, but such a failure should show a bitter lesson, resulting perhaps in unity of action in the future, and hence more good may result from what I tried to do—not that I wish to claim all the credit (?), and I would that none of it fell to me—yet I did work, and for what I thought a good cause, but not for "cheap notoriety." Yours very truly,

W. H. PENDRY.

## SANITARY REPORTS.

### MANITOBA, CAN., VETERINARIAN'S REPORT FOR 1886-7.—REMARKABLE DECREASE IN DISEASE.

Mr. W. McEachran, M.D., V.S., Consulting Veterinarian, has submitted his report for the year ending June 30, 1887, to the Provincial Department of Agriculture. The following extracts show most conclusively the benefits derived by the province from the strict precautionary measures taken by the department to prevent the spread of disease, and constitute in themselves the best defence that can be offered the public for the stringency of the rules enforced.

Mr. McEachran, in opening his report, expresses pleasure at the absence, during the past year, of any serious outbreak of diseases of an epidemic or endemic nature; only sporadic cases having required to be dealt with.

Referring to glanders, he says: I have to report a satisfactory reduction in the number of cases of this most troublesome

pest in every district throughout the province, with the exception of Portage la Prairie, where there has been an increase from four cases in 1885–6 to twelve in 1886–7. This increase is to be accounted for by the unrestricted importation of ponies from the Territories and Montana in bands, by which, to my own knowledge, cases of glanders have been brought. The total number of horses lost or ordered to be destroyed by the district veterinarians was 66, being a decrease of 39 cases as compared with 1885–6, and 100 cases as compared with 1884, the first year in which a veterinary sanitary service was in operation. This I consider a good showing, and illustrates the benefit to the province, for the number and value lost is reduced about two-thirds, while had this disease been allowed to have full sway there is no estimating the loss, which would have been enormous and constantly increasing. I am pleased to have to report the fact that stock owners are thoroughly alive to the importance of stamping out this disease, and in the majority of cases report themselves, not waiting, as was at one time the custom, until some of their neighbors drew attention to the presence of the disease. It is a satisfaction to be able to report no cases of prosecution in the courts. The cases of glanders were distributed over the province in the following districts as compared with last year:

DECREASE AND INCREASE.

| | 1885-6. | 1886-7. | |
|---|---|---|---|
| Brandon and Dennis | 24 | 13 | dec., 11 |
| Dufferin and Rock Lake | 19 | 15 | dec., 4 |
| Manchester and Carillon | 16 | 9 | dec., 7 |
| Selkirk and Marquette | 13 | 5 | dec., 7 |
| Minnedosa | 8 | 2 | dec., 6 |
| Souris and Turtle Mountain | 5 | 3 | dec., 2 |
| Lisgar and Gimli | 5 | 0 | dec., 5 |
| Portage la Prairie | 4 | 12 | inc., 8 |
| Shoal Lake and Russell | 4 | 3 | dec., 1 |
| D'Iberville and Morris | 4 | 0 | dec., 4 |
| Norfolk | 2 | 4 | inc., 2 |

Of these, 63 cases suffered from glanders and three cases from farcy; 61 cases were quarantined as suspected, of which 21 were destroyed, the balance being released. This, no doubt, will inspire confidence in the owners of stock, as it shows that veterin-

arians destroy animals only after carefully considering the cases and arriving at a proper diagnosis.

Referring to mange, Dr. McEachran says the disease has been reported from but few districts, being nearly the same as last year. Being amenable to treatment, the disease is easily controlled. The districts from which it was reported were as follows: Brandon, 6; Portage la Prairie, 24; Dufferin and Rock Lake, 2; Selkirk, 1; Shoal, 1; total, 34.

In regard to tuberculosis, the report points out that but little is known of the disease in this country as yet. But as a natural consequence of the importation of fine in-bred cattle, it will gain foothold here, as in other countries, at no distant date. It is suggested that veterinarians be instructed to report all cases which may occur within their private practice, as it is not an affection that will attract much attention except in thoroughbred herds.

Of actinomykosis (big jaw) only four cases were reported during the year. This is a disease which only occurs in sporadic cases, and is contagious only to a slight degree.

Referring to the general health of stock, Mr. McEachran says: I have to report that the general health of stock during the past year has been good. There have been only the ordinary diseases among horses; strangles has prevailed during the spring months to some extent in the counties of Lisgar and Norfolk, but with comparatively little mortality. A good many cows were said to have slipped their calves in the Elm River district, but this was found to be rare and due in all cases to carelessness on the part of the owners of stock in not separating the cattle.

## REVIEW AND NOTICES.

**HINTS ON THE BREEDING AND REARING OF FARM ANIMALS.** By Prof. WALLEY.

A neat little book on this important subject, being a paper read by the author before the Fife Farmers' Club. It contains some excellent points relating to breeding and rearing, and constitutes an excellent addition to the literature of zoötechnic.

THE HORSE, COW AND DOG, WITH ANIMAL CHARACTERISTICS.
By the same.

To his abilities as a writer on important professional subjects Prof. Walley adds those of a poet. Whoever will read his "The Horse's Troublous Life," "The Life of a Dairy Cow," and "The Life of a Dog," will pass interesting hours, and, like the author, find valuable subjects of thought, so well and kindly expressed in "Animal Characteristics."

THOMAS' MEDICAL DICTIONARY.

The well-known veterinary publication house of W. R. Jenkins has sent us a copy of this new and excellent book. It comes before the medical profession with the design of supplying the wants of those who commence the study of medicine and affiliated sciences, and, though seeming to contain but few medical veterinary terms, will no doubt prove very advantageous to the veterinary student. The book is handsomely brought out and the price so low as to bring it within reach of a small-sized purse.

## SPECIAL NOTICE.



## SOCIETY MEETINGS.

### TWENTY-FOURTH ANNUAL MEETING OF THE UNITED STATES VETERINARY MEDICAL ASSOCIATION.

The Comitia Minora of this Association was called to order at 10.30 A. M., at the American Veterinary College, by the President, Prof. A. Liautard.

Members present: Drs. Liautard, Huidekoper, Zuill, Dixon, L. McLean, and Michener. Absent: Drs. Robertson, Lyman, Field, Ross, Osgood.

Eleven candidates for admission to membership were recommended by the Comitia Minora.

The regular meeting met at 11.45 A. M., with Prof. Liautard in the chair. Nearly fifty members answered roll call. The minutes of last meeting were adopted, with but one exception: the Secretary having recorded Dr. Salmon as being elected an *honorary* member, while he was elected an *active* one. The minutes of the Comitia Minora were also read and approved.

The Committee on Intelligence and Education gave very interesting reports from Drs. Paquin of Missouri, and McInness of South Carolina. The report was accepted and placed on file.

The College Committee made a report of progress, stating, through its chairman, Dr. Hoskins, that they had strong reasons for expecting a speedy and favorable termination of its labors.

The Committee on Diseases, through Dr. Zuill, reported at length and stated the prevalence and extent of chicken cholera, hog cholera, rabies, anthrax, glanders and farcy, tuberculosis, contagious pleuro-pneumonia, and also as the Committee incline, the non-contagious disease, cerebro-spinal meningitis. The Committee received a vote of thanks, and their report was ordered on file.

The Prize Committee were at first unable to decide upon the merits of the two papers presented. Dr. L. H. Howard was added to the Committee, in the absence of J. C. Meyer, Sr., and the papers referred back for a report at this meeting.

The Committee on Army Legislation presented a printed bill, but nothing more was done by the Associatiou than to accept the bill. The Committee was continued.

By direction of the Association, the Secretary cast an affirmative vote for the following candidates for admission to membership: Drs. T. W. Moyer, Werner, Turner, Lamberton, Barrow, Strange, C. C. McLean, Blank, Connell, Sellers, and Farnsworth.

The Treasurer's report was then audited and received.

There were nearly twenty-five new applicants for membership.

The Prize Committee again reported, and were not in favor of granting the prize to either essayist. On motion of L. McLean, seconded by Dr. Clements, the report was received.

Election of officers for the ensuing year resulted as follows:

President—Prof. R. S. Huidekoper.

Vice-President—J. C. Meyer, Jr.

Secretary—C. B. Michener.

Treasurer—Jas. L. Robertson.

Board of Censors—Drs. Dixon, Lyman, Hoskins, Zuill, L. McLean, Ross and Bryden.

A recess of half an hour was then taken, after which Dr. Michener offered his alteration of Section 1, Article IV., of the By-Laws. This was carried, and in the future *none but graduates* will be admitted to the Association.

By vote, the papers offered for prizes were taken up and acted upon by the general meeting. A ballot taken resulted in granting the prize to "Trianon," —Dr. John Wende, of Buffalo, N. Y.

Dr. L. McLean here gave notice that he would at the next meeting offer an alteration of Article X., Chapter VII., of Constitution, making it read as follows: "Hereafter, prizes will only be given to the best original paper read and defended by the author at the annual meetings."

Bills presented by the Treasurer were ordered paid.

There were three casting-tables presented to the notice of the Association, and no one of them could be officially endorsed. There was a general opinion among members that one of these was far superior to the other two.

On motion of Dr. Martinet, it was decided to hold the semi-annual meeting next March in Baltimore, Md.

A somewhat spirited discussion followed upon cerebro-spinal meningitis, which elicited much difference of opinion as to its pathology, means of spreading, etc.

The Secretary had other papers in his possession, but owing to the lateness of the hour they were not read.

The Association then adjourned.

In the evening a banquet was held at Clark's. The following toasts were offered and responded to:

"The President of the United States," by Dr. Williamson Bryden, of Boston.

"Our Profession," by Prof. Liautard.

"Our Sister Profession," by Dr. Raymond, of Brooklyn.

"The Bureau of Animal Industry," by C. B. Michener.

"Our Legislature," by Hon. J. Cantor, N. Y.

"The Press," by A. C. Hummell, M.D., Pa.

"The Ladies," by Dr. Pendry.

Informal speeches, interspersed with excellent songs, concluded a very pleasant meeting.

C. B. MICHENER, *Secretary*.

## NEW JERSEY STATE VETERINARY SOCIETY.

Twenty-four graduates, fifteen of whom had been members of the old Association, have assisted in organizing a New Jersey State Veterinary Society, to which *only graduates in good standing from some veterinary college or university having power by law to grant diplomas are eligible to membership.* Every graduate known in the State was duly notified of the action about to be taken, and a meeting was held August 4th, 1887, at the office of Dr. William Herbert Lowe, Paterson, New Jersey, when officers were elected and the organization completed.

The Society proceeded immediately to comply with the terms and provisions of the act of the Legislature for the promotion of veterinary science and art. The officers and members present signed and sealed the certificate of incorporation which had been previously drawn by Senator Griggs, after which the document was forwarded to the Secretary of State at Trenton, as required by law. Six of the incorporators are graduates of the American Veterinary College; three are graduates of the Columbia Veterinary College; two are graduates of the Ontario

Veterinary College; two are graduates of the Chicago Veterinary College, and one is a graduate of the Royal College of Saxon.

The following are the officers elected at the meeting held in Paterson, August 4th:

President—J. C. Corlies, D.V.S., of Newark, N. J.
First Vice-President—Edwin R. Voorhees, D.V.S., of Somerville, N. J.
Second Vice-President—Eldon L. Loblein, D.V.S., of New Brunswick, N. J.
Secretary—William Herbert Lowe, D.V.S., of Paterson, N. J.
Treasurer—Ludwig R. Sattler, D.V.S., of Newark, N. J.
Censors—Andrew Sherk, V.S., of Newark; Joseph Nayler, D.V.S., of Jersey City; Elmore R. Mercer, D.V.S., of Montclair; Matthew A. Pierce, D.V.S., of Paterson; and Robert W. Carter, V.S., of Jobstown.

All except two of the newly elected officers had been members of the old Association. They had disconnected themselves from it simply because they did not consider that it would be either advantageous to them or to the veterinary profession of New Jersey to be associated with the non-graduates who were members. It appears that recently the non-graduates have taken a more active part in the affairs of the Association than the graduates, for at a recent meeting, it is alleged, four of the officers elected were non-graduates.

The following distinguished gentlemen were proposed by the Secretary for honorary membership:

Prof. Liautard, Dean of the American Veterinary College.
Dr. Ezra M. Hunt, Secretary of the New Jersey State Board of Health.
Prof. Rush S. Huidekoper, Dean of the Veterinary Department, University of Pennsylvania.
William L. Zuill, M.D., D.V.S., of the same institution.
Dr. Salmon, Chief of the Bureau of Animal Industry, Washington, D. C.
Prof. Chas. B. Michener, of the American Veterinary College.
Prof. Smith, Principal of the Ontario Veterinary College.
Prof. James Law, of Cornell University.
Prof. C. P. Lyman, of Harvard University.
Prof. D. McEachran, of Montreal Veterinary College.
Dr. George Fleming, of London, England.
Prof. James L. Robertson, of the American Veterinary College, was proposed by Dr. Pierce.
Prof. Baker, Principal of the Chicago Veterinary College, was proposed by Dr. Voorhees.
Prof. Dr. Leisering, Geh. Med. R., Germany, was proposed by Dr. Sattler.
All the above gentlemen were unanimously elected to honorary membership.

The objects of the new Society, as stated in the certificate of incorporation, are: "The promotion of fraternal feeling among its members; the welfare of the veterinary profession in general, and of New Jersey in particular; the advancement of the science and art of veterinary medicine and surgery; aiming to protect the rights and privileges of practitioners, and to elevate the standard of the profession by scientific intercourse."

President Corlies appointed Dr. Krowl, of Passaic; Dr. De Clyne, of New

Durham; Dr. Pocock, of Pennington; Dr. Loblein, of New Brunswick, and Dr. Voorhees, of Somerville, a Committee on By-Laws.

The members decided to hold the next meeting in Newark either in September or October, when the report of the Committee on By-Laws will be acted upon, and such other business transacted as may come before them at that time. The time of calling the meeting was left in the hands of the President.

WILLIAM HERBERT LOWE, D.V.S. *Secretary.*

## VETERINARY MEDICAL ASSOCIATION OF NEW JERSEY.

The eleventh regular meeting of the New Jersey Veterinary Medical Association was held at the Hotel Asbury, Asbury Park, Thursday, August 11th.

The meeting was called to order at 12 o'clock, noon, by the President, Dr. J. W. Hawk, of Newark.

The roll was called by the Secretary, and the following gentlemen answered to their names:

Drs. J. W. Hawk, of Newark; W. B. E. Miller, of Camden; W. P. Smith, Trenton; D. J. Dixon, Hoboken; W. H. Cooper, Salem; J. C. Dustan, Morristown; W. B. Hayden, Newark; B. F. King, Little Silver; T. C. Sanford, Asbury Park; J. Kehoe, Lyndhurst; J. C. Higgins, New Brunswick; R. E. Stanwood, Freehold; W. W. Rowland, Jersey City; A. C. Doyle, Hightstown; A. T. Sellers, Camden.

Reading of the minutes; adopted as read.

The President excused himself from a lengthy address.

There was no unfinished business. There was no report from the Treasurer, as he was absent.

A recess was taken for the purpose of a report from the Board of Censors and Trustees.

There being no full board, the President appointed Drs. D. J. Dixon and Wm. P. Smith to fill vacancy.

The meeting being recalled, the chairman made the following report: That they had examined Dr. A. T. Sellers, of Camden, and unanimously found him qualified to become a member of this Association, and that the examination of Mr. Goble had been unfavorable.

Moved and seconded, that the Secretary notify Mr. Goble of his rejection, with an invitation to come before them again.

The essayist, Dr. D. J. Dixon, was excused on the ground of not having been notified by the Secretary.

Remarks were made by Drs. Dixon, Miller, Dustan, Sanford, Higgins and others.

The *World* had recently contained an article relating to the Association, which was read by the Secretary and condemned by the Association. Dr. Higgins moved that an article in rebuttal be sent to that paper, and that a committee be appointed to make a report. Seconded and carried. The President appointed Drs. Miller, Dixon, Higgins and Cooper.

### APPLICATIONS FOR MEMBERSHIP.

Dr. Miller proposed the name of Dr. Wm. Dimond, of Trenton.

Dr. Smith proposed Albert Brown, of Winsor.

MISCELLANEOUS BUSINESS.

The Secretary read the resignation of E. L. Loblein, of New Brunswick, and also a letter from Dr. Lowe tendering the resignation of several members.

EXPELLED.

Jas C. Corlies, Wm. Herbert Lowe, L. R. Sattler, M. A. Pierse, E. R. Mercer, J. Nayler, and J. Newton Krowl. (All but two in arrears).

Dr. Miller moved that the Secretary notify those who have paid their dues up to date of the acceptance of their resignations; and those who are in arrears, that by paying up their resignationwill be accepted, otherwise to be rejected and take the regular form of expelled members. Seconded and carried.

The meeting then adjourned for dinner. At 4 P. M. the President recalled the meeting to order.

The Chairman of the Committee made the following report for the press:

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ASBURY PARK, Aug. 11th, 1887.

The Second tri-annual Meeting of the New Jersey Veterinary Medical Association for the year 1887 was held at the Hotel Asbury, Asbury Park, on Thursday August 11th, 1887, twenty-seven members and visitors being present from the several sections of the State, and much interest being manifested in the proceedings of the meeting.

Interesting papers were read and discussions thereon participated in by quite a number of the members.

There were two new members admitted and several applications for membership were received. The Society is now in the fourth year of its existence and is in a flourishing condition and doing good work for the promotion of veterinary science.

Its membership is composed of regular graduates and such practitioners of veterinary science as are able to pass a competent examination before a Board of Censors elected by the Society.

It is the first society legally chartered by the Legislature of New Jersey, and is known and recognized as such by the officers of the State Government and by the citizens at large.

After the regular order of business had been gone through with, the members sat down to a sumptuous repast to which all present did ample justice. The next tri-annual meeting will be held in New Brunswick on the second of December next at which interesting papers are expected, including one each from Prof. Rush S. Huidekoper, Dean of the Faculty of the Veterinary Department, University of Pennsylvania and Prof. Frank S. Billings, Veterinarian of Nebraska.

Dr. Dustan moved to elect Dr. Cooper to fill the vacant Treasurership. Seconded and carried.

President appointed Dr. A. T. Sellers next essayist.

Moved and seconded to hold our next meeting at New Brunswick. Carried.

President appointed Dr. Higgins a committee of one to make arrangements for next meeting. Adjourned to meet Thursday, December 2d, 1887, at New Brunswick.

W. H. COOPER, Secretary, Salem, N. J.

## NEWS AND SUNDRIES.

Disease in Michigan.—A dispatch from Detroit last Saturday stated that "Meat-inspector Sullivan says there has not been a case of Texas or splenic fever among the cattle of Detroit. He has examined nearly all the cases of reported sickness, and pronounces them simply 'red water,' which is a malady resultant from the severe drought. About one-half of the meat eaten in Detroit is Texas beef."—*Nat. Live Stock Jour.*

Contagious Diseases in Illinois.—Word comes from Quincy, Ill., that "Texas fever developed in a herd of 250 cattle, pastured south of here. It is supposed to have been introduced by a car-load of western cattle received August 25th. Thirteen native cows have died, several are missing, and others are sick. A strict quarantine has been established."

It is stated that "hog cholera is becoming a very serious thing in Henry County, Ill. The disease exists in Kewanee, Asco, Loraine, Edford, Phenix, Andover, and Wethersfield townships. Thousands of dollars' worth of hogs have died, and farmers in Kewanee and Wethersfield townships, where the disease is of a more virulent nature, are losing hogs at the rate of from ten to twenty head a day".—*Nat. Live Stock Jour.*

Foot and Mouth Disease.—A dispatch from Dakota last Thursday, stated that "health officers who examined the diseased cattle at Richardson say that suspicious symptoms attacked two herds. They point to foot-and-mouth disease. The doctors say there is no pleuro-pneumonia. Local stockmen are excited. The affected cattle are scattered over several miles of territory. Efforts will be made to keep the malady from spreading,"—*Nat. Live Stock Jour.*

Territorial Veterinary Surgeon.—Dr. A. J. Chandler, of Detroit, Michigan, has been appointed Territorial Veterinary Surgeon of Arizona. Dr. Chandler is a graduate of the Montreal School of Veterinary Surgery, and has had a very extensive and successful practice in Michigan for many years, which he is now forced to relinquish on account of ill health, which he believes he can escape in a less rigorous climate.